

METHOD AND APPARATUS FOR DRIVING TWO-DIMENSIONAL MODULATOR ARRAYS

ABSTRACT

In one embodiment, a micro electromechanical system (MEMS) driver circuit receives a pulse-width modulated (PWM) signal and uses it to control a voltage at a MEMS cell. The driver circuit further includes a current source, a capacitor, and a reset circuit that can discharge the capacitor. The voltage at the MEMS cell can be controlled in proportion to the pulse width of the PWM signal. In another embodiment disclosed, a MEMS driver circuit receives a first PWM signal and a second PWM signal. Each PWM signal is coupled to a current source. One current source can provide a course current control and the other current source can provide fine current control. The driver circuit can further include a capacitor and a reset circuit for discharging the capacitor. The voltage at the MEMS cell can be controlled in proportion to a summation of the first and second current sources. According to another aspect of the embodiments, a method of controlling a voltage at a MEMS cell is disclosed. The method includes the steps of receiving a PWM signal, controlling a current source with the PWM signal, and adjusting the voltage at the MEMS cell in proportion to a pulse width of the PWM signal.